

PNW Ecotone—Episode 2: “Beyond the Concrete Jungle: Cities as Sources of Ecosystem Services”

Total running time: 4:19

Date: October 2012

[Guitar and bassoon intro music]

Yasmeen Sands: From the Pacific Northwest Research Station, this is “PNW Ecotone.”

Quick – when you hear the word “ecosystem,” what comes to mind? A forest? A river, maybe? Well, how about a city? It turns out, the green spaces in our urban areas can offer a range of ecosystem services, just like forests and rivers.

Station scientists are helping to describe the value of urban areas and the services they provide right here in the Pacific Northwest. Their newest program, the “Green Cities Research Alliance,” is now in its third year.

Here’s Kathy Wolf, a station social scientist based in Seattle and one of the Alliance’s lead investigators.

Kathy Wolf: We look at this idea of ecosystem services, and if you read about ecosystem services, or talk to more traditional ecologists, it’s believed that ecosystem services are derived from more wildland and rural areas. And of course they are—working landscapes, agriculture, forests, watershed areas that provide drinking water. But ecosystem services are also available from those ecological functions that happen in cities.

Yasmeen Sands: Wolf and her colleagues are working in and around Seattle, Washington, the largest metropolitan area in the Pacific Northwest, in a state where more than eighty percent of the population lives in urban areas.

Central to all of their work is the acknowledgment that cities are, indeed, ecosystems.

Kathy Wolf: We do maintain and believe that ecological functions and ecological outcomes are happening within cities. Now, you may not find pristine forests, you may not find that wild river in the city, but there are underlying ecological functions that do happen in cities.

We are acting on the premise that the environment generates benefits for people, and that includes those environments that are within cities.

Yasmeen Sands: So what are some of those benefits? Well, there's storm water management. City plants and trees absorb rainwater, reducing the amount that flows into the sewer system. Then, there's air quality enhancement. Urban plants and trees reduce air temperature and trap airborne pollutants right on their leaves. Then there are also the positive effects that urban ecosystems have on human health and well-being.

Kathy Wolf: There's this remarkable array of benefits that people get from the passive experience of nature. Merely viewing nature, if you feel stressed, brings physiological stress response down. Heart rate, blood pressure, and other indicators of stress are reduced by merely viewing nature after you've had a stressful experience.

Yasmeen Sands: Community economics benefit from urban ecosystems, too. Wolf found that the presence of quality tree canopies in commercial business districts had a measurable effect on shoppers. Shoppers not only said these places look more attractive, but they also made inferences about a place based on its trees – they said that they think the merchants there would be more helpful, that product quality will be better, and that they would be willing to pay more for products in places that have trees.

Wolf and her colleagues will continue their study of urban-based natural resource sciences, looking at things like what motivates people to engage in stewardship activities, how parks and open spaces encourage physical activity, and why urban foraging is important.

Yasmeen Sands: “PNW Ecotone” is produced by the U.S. Forest Service’s Pacific Northwest Research Station, which is solely responsible for its content. For “PNW Ecotone,” I’m Yasmeen Sands.

[Guitar and bassoon outro music]